

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 October 2005 (13.10.2005)

PCT

(10) International Publication Number  
**WO 2005/095636 A2**

(51) International Patent Classification<sup>7</sup>: C12Q 1/32

(21) International Application Number:  
PCT/US2005/009759

(22) International Filing Date: 23 March 2005 (23.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/556,281 24 March 2004 (24.03.2004) US

(71) Applicant (for all designated States except US): GEN-  
PATH PHARMACEUTICALS, INC. [US/US]; 300  
Technology Square, 7th Floor, Cambridge, Massachusetts  
02139 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): HAN, May [CN/US];  
46 Browne Street, Apt. 3, Brookline, Massachusetts 02446  
(US).

(74) Agents: HALEY, James F., Jr. et al.; Fish & Neave IP  
Group, Ropes & Gray LLP, 1251 Avenue of the Americas,  
New York, New York 10020 (US).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,  
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,  
ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— without international search report and to be republished  
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: METHODS FOR MEASURING ENZYME ACTIVITIES IN CELLS, BLOOD, TUMORS AND TISSUES

(57) Abstract: ABSTRACT [0072] The invention provides improved methods for measuring enzymatic activities involved in the oxidative and non-oxidative pentose phosphate pathways, and other thiamine pyrophosphate containing enzymes, which are commonly elevated in tumor cells. The assays of the invention are useful for optimizing therapeutic dosing and scheduling of drugs acting on the pentose phosphate pathways by sampling and monitoring enzymatic levels in a treated patient over time. Finally, the assays are useful for identifying and characterizing compounds having beneficial therapeutic effects.



WO 2005/095636 A2